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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,086	09/05/2003	Yong-Chul Park	50736/DBP/Y35	9934
23363	7590	11/06/2006		
CHRISTIE, PARKER & HALE, LLP PO BOX 7068 PASADENA, CA 91109-7068			EXAMINER WEINER, LAURA S	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 11/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/656,086

Applicant(s)

PARK ET AL.

Examiner

Laura S. Weiner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 31-34 is/are pending in the application.
- 4a) Of the above claim(s) 14-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-13 and 31-34 is/are rejected.
- 7) ☒ Claim(s) 3,7 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 9-26-06.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-7, 31 have been considered but are moot in view of the new ground(s) of rejection.

Terminal Disclaimer

2. The terminal disclaimer filed on 9-26-06 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 10/393,294 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Election/Restrictions

3. Applicant's election of Group I, claims 1-19, 31-34 in the reply filed on 12-20-05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
4. The elected species was an electrolyte comprising an additive comprising a sulfone-based compound of Formulas (1), (2) or (3), a C3-C30 organic peroxide of claim 7 and an organic solvent of at least one of carbonates, esters, ethers or ketones where the carbonate is cited in claim 13. The elected species has been found allowable.

The new species searched is an electrolyte comprising an additive comprising a sulfone-based compound of Formula (3), an azo-based compound of claim 8 and an organic solvent of at least one of carbonates, esters, ethers or ketones where the carbonate is cited in claim 13. Therefore, claims 1-13, 31-34 have been examined.

5. Claims 14-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and species, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 103

6. Claims 1-2, 4-6, 8, 10-13, 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narang et al. (WO 99/28987).

Narang et al. teaches on page 19, Example 2, a battery comprising a graphite anode, a lithium cobalt oxide cathode, a separator and an electrolyte comprising a solution of lithium hexafluorophosphate, EC/DMC/triethylphosphate and 2% wt of butadiene sulfone [*Formula 3*]. Narang et al. teaches on page 22, Example 14, a battery comprising a lithium metal anode, a lithium cobalt oxide cathode, a separator and an electrolyte comprising a solution of lithium hexafluorophosphate, EC/DMC/triethylphosphate and 1% wt of an azobis(isobutyronitrile) (AIBN) [*an azo-based compound*]. Narang et al, teaches on page 14, lines 1-7, that the cathode material can be a lithiated nickel oxide. Since Narang et al. teaches that the anode can

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comprise graphite than inherently graphite would have a d002 interplanar distance of 3.35-3.38 and have an Lc of more than 20 nm.

Narang et al. teaches the claimed invention as explained above teaching an electrolyte comprising an organic solvent, a lithium salt and an additive of a sulfone-based compound, the butadiene sulfone or an azobis(isobutyronitrile) but does not specifically state that the electrolyte can comprise the butadiene sulfone and the azobis(isobutyronitrile).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use both compounds, a butadiene sulfone and an azobis(isobutyronitrile) in the electrolyte taught by Narang et al. because it is prima facie obvious to combine two compositions each of which is taught by prior art to be useful for the same purpose in order to form a third composition that is to be used for the very same purpose. See *In re Kerkhoven*, 205 USPQ 1069; *In re Susi*, 169 USPQ 423.

Allowable Subject Matter

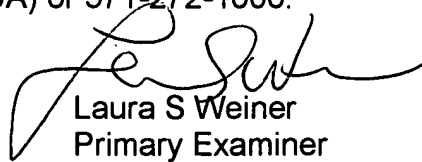
7. Claims 3, 7, 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura S. Weiner whose telephone number is 571-272-1294. The examiner can normally be reached on M-F (6:30-4:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Laura S Weiner
Primary Examiner
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November 1, 2006